REMARKS/ARGUMENTS

New claims are presented to more clearly state the invention claimed. Support for the claims as written is found in Figs. 1A – 1J and pages 22 – 24 of the specification, among others. Because new claims are presented, it is believed that the grounds of rejection previous entered are not applicable. However, the previous grounds of rejection in the context of the new claims are briefly addressed.

Claims Rejection - 35 U.S.C. § 101. Claims 1 and 4-11 were rejected under 35 U.S.C. § 101 on the grounds that the claimed invention is not support by either a specific asserted utility or a well-established utility. Applicant respectfully traverses this rejection.

The library as now claimed consists of specific "reverse turn" structures. As taught in the specification, the libraries of the invention are distinguished and characterized in that they provide a "reverse turn" structure:

> In each of the methods and libraries provided, a specific conformational restriction is obtained upon complexing the peptides or amino acid sequences with a metal ion, such that the conformationally constrained peptide-metal ion complexes can serve as surrogates for reverse turn structures, such as beta turns and gamma turns commonly found in naturally occurring peptides and proteins.

Page 7, lines 24-28. Thus the library as claimed provides "surrogates" or mimics of naturally occurring reverse turn structures.

While the Examiner is correct in that an "individual component" of a library may well have specific and substantial utility (e.g., if it binds to a receptor of interest), a library of different structure reverse-turn metallopeptides, as is specifically claimed, inherently has a closely related specific and substantial utility. A library of reverse turn structure mimics can readily be employed to determine the structure of receptors (i.e., given that the metallopeptides are conformationally rigid, a metallopeptide binding a receptor of interest necessarily provides information as to the three-dimensional structure of the receptor, and the functional groups or amino acid side chains provide information on charge centers, hydrophobic/hydrophilic centers and the like) and the desired three-dimensional structure of a compound

for binding to a receptor. Thus the invention provides a structurally defined library directed to reverse turn structures, which are well-recognized as common biological binding motifs.

Claims Rejection - 35 U.S.C. § 112, First Paragraph. Claims 1 and 4-11 were rejected as not supported by either a specific asserted utility or a well established utility. For the reasons above, this rejection is not applicable to the newly presented claims.

Claim Rejection - 35 U.S.C. § 102. Claims 1 and 4-11 were rejected under 35 U.S.C. § 102(e) as anticipated by Sharma, U.S. 6,027,711. The '711 patent does not disclose a library of metallopeptides "bound to solid phase" as set forth in new claim 24. That is, no "orthogonal sulfur atom-protecting group" is disclosed in the '711 patent that can be employed to permit the synthesis of a library of different metallopeptides, such as mixed pool synthesis, wherein the library members are complexed to a metal or metal group without cleavage from solid phase.

The Examiner asserts that "orthogonal protecting groups" are not "defined." Applicant again asserts that the text at page 14, line 20 bridging page 16, line 18, and specifically at page 14, starting at line 20, defines the functional requirements of an "orthogonal protecting group":

> The SH protecting group is chosen such that (a) the synthesis of peptide derivatives with S-protecting group is compatible with methods of solution and solid phase peptide synthesis, so that the S-protecting group is stable during synthetic procedures, and (b) the S-protecting group can be deprotected in situ, without cleavage from the resin in the case of solid phase synthesis, during the metal complexation step.

It is submitted that this definition, together with the listed protecting groups, is as precise as the matter allows. It is a functional characteristic of the orthogonal sulfur-protecting group that is relevant, not a particular structure formula of the protecting group.

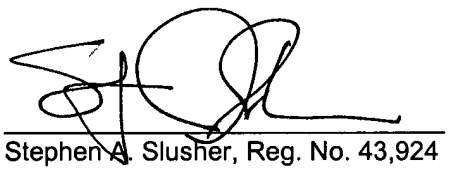
Claim Rejection - 35 U.S.C. § 103. Claims 1 and 4-11 were rejected under section 103(a) as being unpatentable over Hnatowich et al. (U.S. 5,980,861). The ground of rejection is not applicable for the reasons set forth with respect to § 102 above, and further because new claim 24 provides defined amino acids not encompassed by the cited reference.

With respect to the prior Office Action, it is again asserted that the specification does in fact define "orthogonal protecting groups" as discussed above, and that a functional description is both appropriate and proper. To the extent that the prior Office Action suggests that Fmoc may be an orthogonal sulfur-protecting group, Applicant asserts that Fmoc is an amino protecting group, not a sulfur protecting group. While it is certainly well known that Fmoc may be employed in peptide synthesis, Fmoc was discussed in the prior Amendment to demonstrate that the S-acetyl thioester group employed by Hnatowich is not compatible with peptide synthesis, because piperidine, which is commonly used to cleave Fmoc groups from amino functions during peptide synthesis, would also hydrolyze a thioester bond. Thus the the S-acetyl thioester group employed by Hnatowich is not an "orthogonal sulfur protecting group" as defined by Applicant.

In view of the above amendments and remarks, it is respectfully submitted that all grounds of rejection and objection have been avoided and/or traversed. It is believed that the case is now in condition for allowance and same is respectfully requested.

Also being filed herewith is a Petition for Extension of Time to April 19, 2004, with the appropriate fee, together with a Request for Continued Examination. Authorization is given to charge payment of any additional fees required, or credit any overpayment, to Deposit Acct. 13-4213. A duplicate of this paper is enclosed for accounting purposes.

Respectfully submitted,

By: 

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